# Transcript of AHRQ Health Care Innovations Exchange Webinar

***Roller Coaster: Implementation of the Arizona Medical Information Exchange***

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## Participants

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## Presentation

**Operator**

Greetings and welcome to the AHRQ Innovations Exchange Webinar. At this time, all participants are in a listen only mode. A question and answer and session will follow the formal presentation. If anyone should require operator assistance during the conference, please press star zero on your telephone keypad. As a reminder, this conference is being recorded. It is now my pleasure to introduce your host, Judi Consalvo from AHRQ. Thank you, Ms. Consalvo, you may begin.

**Judi Consalvo**

Thank you, good afternoon everyone. On behalf of the Agency for Healthcare Research and Quality, I would like to welcome you to our webinar entitled "Roller Coaster: Implementation of the Arizona Medical Information Exchange (AMIE)". I'm Judi, and I'm a program analyst in AHRQ Centers for Outcomes and Evidence. We are very excited today about our topic and glad to see that you share our enthusiasm. We will be polling you in a few minutes to get a better feel for who has joined us today. Since some of you may be new to AHRQ's Health Care Innovations Exchange, I would like to take just a minute to give you an overview before I introduce today's moderator. The Health Care Innovations Exchange is a comprehensive program designed to accelerate the development and adoption of innovations in health care delivery. This program supports the agency's mission to improve the safety, effectiveness, patient centeredness, timeliness, efficiency and equity of care with a particular emphasis on reducing disparities in health care and health among racial, ethnic and socioeconomic groups.

The Innovations Exchange has the following components:

- Searchable innovations. These are profiles of successful and attempted innovations that describe the innovative activity, its impact, how the innovator developed and implemented it and other useful information for deciding whether to adopt the innovation. There are now over 300 profiles within our database. New profiles and content are added every two weeks.
- Searchable quality tools. The Innovations Exchange presently hosts over 1400 tools. These are practical tools that can help you assess, measure, promote and improve the quality of healthcare. New tools are also added every two weeks.
- Learning opportunities. Many resources describe the process of innovation and adoption and ways to enhance your organization's receptivity to innovative sources to care. Resources include expert commentary, articles, perspectives and adoption guides.
- Networking opportunities. You can interact with innovators in organizations that have developed innovations to learn new approaches to delivering care and developing effective strategies and share information. Posting comments on specific innovations is one way to create with innovators, types of comments include asking questions or responding to questions about how an innovation works. And mentioning additional resources and lessons learned from adopting, implementing and sustaining an innovation.

This webinar is one in a series of events we are planning to support you in developing and adopting innovations in healthcare delivery. You can check our archived materials from previous webinars on our web site www.innovations.AHRQ.gov.

Our next event in November will explore what we call attempts. These are efforts to innovate that didn't succeed as planned because they couldn't be implemented, couldn't be sustained or had unexpected negative consequences. Often you can learn a tremendous amount from what went wrong and what people would do differently. We hope you will also join us for that webinar. We would welcome your thought on other topics we can address with you.

At the end of today's event, your computer will automatically take you to a brief evaluation form. Please be sure to complete the form as your comments will help us to plan future events that meet your needs. You can also e-mail your comments and ideas to us at info@innovations.AHRQ.gov.

Okay. So before I turn this over to our moderator, I would like to give our speakers a sense of who we have out in the audience today. Please answer the polling question you now see on your screen. Would you describe yourself as an innovator, a potential adopter, a researcher, a policymaker or other? While we gather your responses, I want to clarify how we're handling

questions. We would very much like to hear from you. And you are welcome to send us your questions online at any time by using the Q & A feature on the web site for this presentation. Just type in your question and click on send. For those of you who are listening by phone, we will open the phone lines after the presentations are over so that you can ask questions of any of our speakers. You may want to jot down your questions for the speakers since we won't open the phones until they are all done.

While we don't anticipate any technical problems, let me give you a few tips in case you experience any. First, if you experience any difficulty with the sound coming through your computer speakers, you can always join us by the telephone. The telephone number is 1 877-705-6008. If you have any trouble with the slides or your connection to the webinar try pressing F5 to refresh your screen. You can also click on the help button or send a note using the Q & A feature and someone will get back to you. If you are listening by phone, you can also press star 0 on your phone for assistance. We are recording this event so that anyone who couldn't make it today or needs to leave the webinar early can listen to the recording or read the transcript. You'll be able to find links to a downloadable recording, the slides and a transcript on the Healthcare Innovations Exchange web site in a few weeks. In fact, if you would like to download the slides for today's presentations you can find them on our web site now at www.innovations.AHRQ.gov. Now let's look at the responses to my earlier question. Okay, there are 31 innovators on here. Potential adopters, we have 14. Researchers, 26. Policymaker indicates 12. For other, 36. Thank you. Thank you for responding to that. We've designed this webinar to be useful to a broad spectrum of participants. But it's really helpful to know who we are talking to.

Today's webinar is a result of a collaboration effort between the Health Care Innovations Exchange and the AHRQ-sponsored Medicaid and Medical Directors Learning Network. We will be learning about the ups and downs of the innovative Arizona Medical Information Exchange or AMIE from individuals involved in its creation and implementation. And we'll hear the perspective of a physician on how her practice has been impacted by AMIE. AMIE enables clinicians to immediately access hospital discharge, laboratory tests, and medication data on specific patients from other providers and allows them to make more fully informed clinical decisions, avoid test duplications, ensure safe medication prescribing and provide continuity of care for Medicaid beneficiaries.

With that very brief introduction, I would like to introduce our moderator for today's discussion, Foster Gesten. Dr. Gesten is the medical director for the Office of Health Insurance Programs in the New York State Department of Health where he provides clinical direction and leadership for a team of professionals engaged in quality oversight, performance measurements and clinical improvement within health plans and public insurance programs in New York. He's also an active member of the expert panel for the Innovations Exchange. We are very pleased to have him with us today to guide us through this topic. Foster.

**Foster Gesten**
Thank you very much Judi. I want to echo and welcome everyone. Good morning and good afternoon depending on where you are for today's webinar on the Arizona Medical Information Exchange or AMIE sponsored by AHRQ and the Innovations Exchange. As Judi said, my name is Foster Gesten. I'm the Medical Director in the Office of the Health Insurance Programs in the New York State Department of Health and I'll be moderating today's webinar.

This is a particularly timely and relevant topic given the attention being given both nationally and within states to health information exchange as a key component of virtually all the major healthcare reform initiatives that we are seeing, as well as the importance of health information exchange to the definition of meaningful use as it relates to the American Recovery and Reinvestment Act or ARRA. The promise of having the right information available to treating clinicians and patients and families as well at every critical point of care delivery and decision-making, which seems like such a simple thing to ask for, is currently counter balanced by the reality that we all know of fragmented care and incomplete clinical information.

For today's agenda are today's four speakers will take us through the background and the reasons for the creation of AMIE, the process of getting it running, implementation challenges and successes and finally the look and feel of the Exchange from the point of view of the practicing physician. It is a story of only one state and one project, but as you will soon see and hear, they will reveal all of the relevant issues including those related to policy, technology, legal and privacy behavioral and fiscal realities that must be successfully addressed in order to make this enterprise work effectively for any organization that may be doing information exchange. So let me briefly introduce our first speaker and innovator, Dr. Marc Leib, who is the Chief Medical Officer for the Arizona Health Care Cost Containment System or AHCCCS. Dr. Leib oversees quality assurance and improvement, the development of medical policies, complaint investigations, and regulatory compliance to assure the appropriate medical services are delivered to the million members of AHCCCS, Arizona's Medicaid program. Dr. Leib also participates in AHCCCS' e-Health initiatives including AMIE and e-Prescribing programs. In addition to having practiced anesthesiology for 20 years, Marc is also a lawyer having previously practiced in Washington D.C. Dr. Leib.

**Marc Leib**
Thank you, for that kind introduction. Just as a way of background on the next slide, we can see that the AMIE project is actually just one part of the overall AHCCCS e-Health initiatives. This is a vision that we're all sharing here to transform the Arizona Medical Program -- we have turned the Medicaid program here AHCCS into a 21st Century high quality health delivery system. If you start at the upper right hand corner of this slide, one other part of this overall vision is the eHR purchasing collaborative which we are calling the PACeHR Project. We have web-based and self-help and e-learning for members that we will be developing. As part of our

overall vision, there will be clinical decision support and enterprise decision support for both our physicians and our health plans, and an e-Prescribing component for those physicians who do not have eHRs and have no intention of adopting that technology in the near future. Just stand-alone e-Prescribing efforts will be made to align them with this. And then in the upper left hand corner, the AMIE project, the Arizona Medical Information Exchange, which is the subject of today's talk. Next slide, please.

The vision was actually articulated by our director, Anthony Rodgers, back in 2007 in which he says if an AHCCCS member happens to be in New York and goes to the emergency room, that provider should be able to access all the relevant health information needed to treat that patient successfully, from getting that information from Arizona and then at the conclusion of that treatment, sending that information back to Arizona so that the patients' home physicians would know what was done. That's a continuity of care we have never had before and definitely want in the words of Anthony Rodgers. So why AMIE? Next slide, please.

Well we're going to use AMIE to facilitate better coordination of care for acute and chronic illnesses including our behavioral health program. In Arizona, behavioral health is delivered through a completely separate system that operates under a different agency but it's actually because of some of the problems from lack of communication between behavioral health system and the physical health system led us to wanting to adopt this, so they are definitely a part of this program.

We want to enhance the opportunities for self-management through personal health information and integrated wellness applications for our members. We have in Arizona an extremely high percentage of diabetic patients with our Native American population. If they were able to access information and train themselves on their -- to better their self-management, we know we would improve our program.

We want to improve the quality of care in oversight and transparency by timely performance information both of our health plans and our providers so we all know how we're doing. We want to reduce our costs and we believe that through the AMIE program we should be able to reduce medical program costs by 3% and administrative costs by at least 2%. Those are significant savings, especially in these tough economic times.

And it is our goal to achieve information sharing through Health Information Exchange by 90% of our providers by 2011. That's an ambitious goal but we are on our way to being able to achieve that.

Next slide. So where is AMIE today? We are operating essentially statewide. Any provider within the state can log onto AMIE with nothing more than a computer and Internet access. They have to have gone through some training in the AMIE program and be issued a user name and password and this will be more explained fully in the upcoming talks. But it is not geographically limited to one city or one county. We currently have over 5.3 million records in AMIE and that was last month in July. They include lab data through one of our two biggest commercial labs here. We have medication histories through all of our health plan PBMs. We have discharge summaries and other documents from the three largest hospital systems. And we will soon be adding more hospital systems to the program.

We currently have the information on 2.5 million patients, which is more than 40% of the state's population. And we have currently 100 active users. And that number again we will be scaling up the system now that we have shown it works and works well, we will be scaling that up to hundreds and then thousands of clinicians over the next couple of years. The expansions are already in process. And we are moving forward.

With that, I believe I'm going to turn the conversation back to Foster to introduce our next speaker.

**Foster Gesten**
Great, thanks, Marc. If it's okay with you, I have one question that came up and I'll ask it now. And I think you're the right person because it really talks about the future vision of the project. And the question is from Jennifer. She asks, "I've read that AMIE accesses clinical rather than claims or administrative healthcare data. Do you think it will be practical or useful for this data to be made available as well to people who are involved in claims processing like insurance carriers and other third parties that may need this data in the future, for example workmen's comp, HMOs and so on."

**Marc Leib**
Certainly I can see a value in providing that information to those involved in claims processing as we move forward and expand both the number of users and the scope of the project. Not only will new physician and other provider users be added but new types of users will be added to the program as we go along so that this information in the future will be available to health plans and other users who have a need to know this particular information. This is after all, protected health information so there has to be a reason for them to have it. But if they get over that hurdle, there's no reason that it will be just physician only.

**Foster Gesten**
That's great. You did so well I'm going to ask you one more quick one. Do your PBMs charge a transaction fee for medication history data?

**Marc Leib**
No, they do not. We provide that at no charge.

**Foster Gesten**
Thank you so much Dr. Leib. Our next speaker will be Perry Yastrov who is the Project Director for Electronic Health Records Services and Systems for AHCCCS. Mr. Yastrov has been working in the field of technology in high tech for over 27 years including work in startup as well as established companies and also working as a consultant. Mr. Yastrov has been responsible for a number of large projects at AHCCCS including establishment of the state's 2.1.1 web site, data warehouse, and most recently the health information exchange project. He serves as the Chairman of the Health Information Exchange Work Group for the National Association of State Medicaid Directors Collaborative for Medicaid Transformation. And with that, welcome Mr. Yastrov to present.

**Perry Yastrov**
Thank you, Foster. I'm going to talk about how we got started and a little bit about where we are at today. This all started back in 2007 when the Centers for Medicare and Medicaid Services released grants for Medicaid transformation. There was $150 million over 2007-2008 where it was released. We received one of the single largest grants thanks to Director Rodgers' vision. Going on to the next slide, when we received the money Director Rodgers turned to me and said here, go make it happen and I kind of started sweating and having nightmares. We broke it up into three pieces to make it a little easier to manage. One is the Health Information Exchange, which eventually became the Arizona Medical Information Exchange, which we affectionately call AMIE. A second is addressing electronic health record adoption, which resulted in a program called PACeHR, which is a collaborative purchasing program that we are launching here in the state. And then the last is a Medicaid database for clinical decision support and population health management.

Going on to the next slide, AMIE is a secure Health Information Exchange. It's a web based viewer application. I'll talk a little bit more about that. The objective is to give providers quick access to health information through the Internet at the point of care so that it will inform them in treatment decisions. So the major goals, coordination of care. We want to enhance self management, improve oversight and transparency, reduce cost and again all of this done by 2011. No problem.

Going on to the next slide. So some guiding principles. We started off with wanting to make this as low cost or free to the providers as possible because we don't want that to be a barrier to accessing the information. We're not going to see value if the doctors don't participate.

We chose to use open source software. Again, this is to keep the ongoing cost of the system as low as possible and to make it easier for other organizations to adopt anything that we may have developed using the taxpayer dollars. So we selected software that was developed in Massachusetts as part of the first NHIN pilot projects – the Nationwide Health Information Network that the Federal Government is doing. So that was something that an organization called MA-SHARE developed. We adopted that, we've done a lot of work on top of that and enhanced it and it resulted in AMIE. Following standards around security and privacy certainly HIPAA is something we have had to pay a lot of attention to. Data exchange, messaging standards, terminology, web technologies and so on. And privacy and security again is absolutely paramount in doing any kind of project like this.

Going on to the next slide. So we had a lot to learn when we got started. If you look at this slide, the different terms that were floating around in 2007 meant at least for myself and my team we have a much better understanding of what the definitions and the differences are in these different terms. I'm not sure if the industry at large has arrived at that. But certainly 2007 there was a lot of confusion. So we had to sort out not just these kinds of issues but a lot of other issues before we could really get started.

So going on to the next slide, one thing we did and I think any good project should do, is understand your users before you actually start building anything. So there was a state roadmap health information technology that was done as part of the Governor's call to action in 2005. We also had an environmental scan. We also did surveys through our state licensing boards. And we did a number of provider focus groups and some professional forums to get feedback on what their needs were.

So the result of that was a number of things. One informed us what type of information the physicians would find to be most valuable to them. And that's how we arrived at the discharge summaries from the hospitals, the lab results from the labs. And then medication history, which is aggregated from the PBM claims data that we're getting.

So this diagram shows you at a conceptual level what AMIE looks like. The purple boxes are the people we are currently sharing data with or from. They are our partners. The blue boxes are future. On the left side is our directory services. We do not store anything centrally. This is a federated approach. So the information from the labs, the hospitals, the PBMs resides where it originated. The pharmacy information is actually aggregated by a contractor that we brought on board through the project. So we don't have a centralized storage. The directory services maintains an index of the patients for which information is available and pointers to where that information resides.

On the right-hand side you see there's a little person sitting at a monitor. In a typical Health Information Exchange, if there is such a thing, it's generally understood that information exchange is exchanged between systems. And again, based on the feedback we got from looking and talking to our users and understanding their needs, there isn't a great deal of adoption of electronic health record systems and furthermore health record systems that are interoperable.

So in order to realize value early in the process, moving on to the next slide, we decided to create a web based or browser based viewer. Again eHR adoption was limited. We wanted to realize value as early in the possible as possible yet we wanted to keep it simple, easy to use and still maintain the security and privacy of the patients and their information. We believe we've accomplished this. I'll talk a little bit more about the viewer in a little bit. Longer term though, we do want to be able to interact with electronic health record systems as they become more prevalent in the marketplace as they are adopted and as the eHR capabilities themselves allow the interoperability. So we built AMIE using a services oriented architecture following the NHIN concepts that allow the messages that need to go back and forth in order to understand what patients' information is available and what kind of information they have available.

So going on to the next slide, one thing we heard very early on from those whose data we wanted to make available was that they were not going to give us their data to be stored in some centralized database to be done with who knows what. So we came up with an approach that allowed their data to be able to be maintained in their own environment. We created something we call an emulator. Some other vendors of production or commercially available HIE products call it servers. It sits between the exchange and the clinical systems and it collects the information from the clinical system, converts it into the XML standard that we choose to use over the exchange, which is the clinical document architecture or CDA. And then that is made available over the exchange to be viewed on the browser.

So going on to the next slide, the way that the information flows through the exchange whether it's through our viewer, or if you go to the next slide, an electronic health record system. The first step that happens is the clinical system informs our directory services that there is a piece of information available for an individual. And that then is updated in our indexes so we now have an entry for a patient in our index. And a pointer in our record locater that indicates what kind of information, what kind of document or record is available and where that record is located. The next step is the clinician goes on and in the process of treating their patient and one of the things we did set out initially is that AMIE is only used for treatment at this point in time. Eventually we'll get to those other uses. They will go on to AMIE and they will identify the individual and discover the subject that's available. So then the response is returned. If we know about the patient, we will let the user know that we have them in our index. The next step then is to be able to identify what documents are available for that individual. And then the clinician can select which documents they want to retrieve. I'm on Step 6. And that goes peer-to-peer, that's a

technical term, so I apologize for anybody that's not technical. It goes directly from the viewer application to the clinical system to retrieve the document. It's returned to the browser. It's not stored in any intermediate system. It's a direct exchange at that point. And then the user can use the information in that document for making their clinical decisions.

So going on to the next slide, I'm going to show you some screen shots of our web based viewer application. I think you'll find it simple and intuitive and certainly the training for it and feedback we've gotten from the users has been very good. Nobody has asked us how to do something with it.

So the first step is logging in. So each user is authenticated. You'll hear a bit more about how we provision user accounts from Dr. Murcko, but we use strong passwords. There are -- you're not going to do that?

**Anita Murcko**
Only if there are questions about it.

**Perry Yastrov**
Okay. They have to be licensed in the state to practice and need to be registered with the Medicaid program at this point in time. We use strong passwords. There are notices on a number of the pages that reinforces the privacy and the purpose of use of AMIE and the information that's available over it.

Going on to the next slide. The patient search screen is where the user is able to identify the patient that they are treating. They have to enter at least three of four pieces of information. This is to prevent phishing like entering the first letter of somebody's last name and getting everybody who begins with A or something like that.

Once they have identified the patient going on to the next screen, they attest to their relationship. Again, it has to be for treatment purposes. So there are a number of selections, which indicates what kind of treatment relationship the user has with that patient. And then they can move on to the next screen where they will get a listing of records that are available for that individual. And from here, there's a couple mechanisms they can use to sort through the types of records that are available. Select what they want to view, going on to the next screen, and then retrieve the documents they want to view. They would click on the retrieve records button.

And finally, well not quite finally but almost finally, the next slide, they are able to view the records in a view display. And they can step through them on the left side and they can see the records displayed in the center part of the screen. And then lastly on the next slide, they can also

bring them up on individual windows and view them alongside of each other for comparison purposes. So that's about very quickly how we got started and where we're at today.

**Foster Gesten**
That's great, thank you so much, Perry. You had a number of questions that came up. Some of them I think are peeking around the corner and will be answered but the ones I think are related to you Perry, if you don't mind, I'll throw a couple at you. One person asks, "What's the lag time, if any, between the patient encounter and the availability of new patient information on AMIE?"

**Perry Yastrov**
The prescription summaries are real-time. The medication history is about two weeks between when we get the feeds from the PBMs. The labs are daily – once a day.

**Foster Gesten**
Okay. Does AMIE have an electronic dashboard that keeps the statistics referenced in the presentation current such as the number of records, patients and so on?

**Perry Yastrov**
We don't have a dashboard per se. We do do reports daily. So we have that information available. We do extensive auditing so we can track what kinds of transactions are happening. What are users doing when they are logging on, what are they looking at and so on.

**Foster Gesten**
Then last question and then we'll move on. How long does it take for a clinician to receive clinical input from the system after a click? And is there -- are there any delays associated with federated systems? Has that been an issue at all in terms of clinical use? And I know we may hear from Sue on this issue, but what do you know about that.

**Perry Yastrov**
The interactivity of the application is very quick. We started off wanting all of our transactions to be less than five seconds and we're finding that they are all about in three second range.

**Foster Gesten**
That's great. Well, there's a number of other questions. And in the interest of moving the presentations along, I'm going to move on. But we're going to hopefully get back to them at the end of the session, either going through the web questions or through open questions you can ask by phone. So thank you again.

Our next speaker will be Dr. Anita Murcko, who is the Medical Director for Clinical Informatics & Provider Adoption at AHCCCS. Dr. Murcko is a practicing internist who provides clinical leadership for the Health Information Exchange and Electronic Health Record utility project since 2007. Prior to joining AHCCCS, Dr. Murcko served as the Chief Medical Officer for Health Services Advisory Group, which is a healthcare quality improvement organization, a QIO, where she led several nationally recognized quality improvement collaborative efforts in diabetes. Dr. Murcko has played a formative role in Arizona's e-Prescribing, Health Information Exchange and Electronic Health Record adoption activities and for these contributions she's been honored as the 2008 Leader of the Year in Public Policy for Healthcare by the Arizona Capital Times. Dr. Murcko, I'll turn it over to you.

**Anita Murcko**
Thank you very much, Foster. I would like everybody for a moment to get in the mood for this session by imagining their last ride on a roller coaster. So I would like you to think about fast moving, lots of ups and downs, scary but at the same time very exhilarating. And I'm getting nods around the room because that's what it felt like and that's what it continues to feel like as we implement AMIE. This slide shows the six major buckets of challenges that we had with AMIE: Politics, policy, technology, funding, adoption and outreach. I put our web site there just so you know that we have information on our web site. But also to thank AHRQ for featuring us on their innovations profile. So in addition to this webinar we are on the AHRQ profile site. So thank you. Now you can go to the next slide.

In the beginning we wanted a statewide health information exchange but we very soon realized that we had to continue to think statewide but start small and very strategically. We used claims information to identify the hospital systems that cared for the largest number of our Medicaid members and they are the first three entries under the map, Banner Health, Maricopa Integrated Health System and the Catholic Healthcare West Hospital at Saint Joseph's. We also looked at the two major labs that served the majority of our members and selected SonoraQuest Laboratories and we looked at our pharmacy claims and decided to contract with a local claims aggregator, Managed Care Pharmacy Consultants.

Next slide. So that was a really good start. We knew who we wanted to share data with us. But that did not necessarily mean they wanted to share data with us from their standpoint. Our single biggest challenge was engaging our data partners. We did have a jump-start. I previously, as you heard, worked at the quality improvement organization in our state and had relationships with our partners. And the AHCCCS leadership, especially Director Rodgers, is very well respected by our partners. But when you are talking to a large organization such as our hospital data partners about a new undeveloped and potentially time-consuming initiative, they let us know up front that this was not on their five- and ten-year plan. HIE was not on anyone's list at that time. So we spent a lot of time sharing the big picture. And building trust.

Next slide. Unfortunately, you've seen this picture, our data partners did not like our big picture up front. We had originally conceived a centralized database so that we could make use of very rich clinical decision support. The data partners, however, were quite clear, especially our hospitals, that a centralized repository at this time was a deal breaker. So Perry and the team researched and retooled and we came up with the solution that he described and you see here. So instead of a centralized data repository, we created the federated system and we thought then everybody was pretty happy.

Next slide. They were happy until we asked them to sign on the dotted line. We thought that we had done wonderful due diligence around our agreements and policies. We started with the Markle Foundation core. We modified it locally with our Arizona Health Information Security and Privacy Collaborative, HISPC, for short. And we very soon discovered that although those agreements were wonderful, that they were not really ready for prime time. A large amount of time subsequently was spent with our data partners. And the goal was to create a best practice type of agreement for sharing. But we found that there were entity specific concerns. We had a local hospital that had its base here in Maricopa County, we had Catholic Healthcare West whose corporate center was in Sacramento, and we had the Banner System, a multi-state entity whose corporate headquarters was in Phoenix. Each of those had very specific concerns and internal agreements that had to be somehow integrated into this data sharing agreement for the Exchange. We also noted that it was very important for not only our techies to understand the technical solution, but everybody from the executive room, board room, CIOs, all the way down through our lawyers and our compliance folks. So there was a lot of discussion around the technical solutions. And we also took those core Markle policies, which are listed in the small bullets, below the third bullet under the expanded policies and we found we had to significantly expand those policies. We had to write specific and detailed procedures. And in many cases create reports. So to actually implement a data sharing agreement that would permit us to do what Perry showed took a great deal of time and energy on the parts of our data partners and our stakeholders.

Next slide. A particularly significant stumbling block was the multitude of existing statutes, none of which, of course, were written to even think about health information exchange. Specifically those around alcohol, drug, mental health treatment, as well as communicable disease and reproductive health. We found in this discussion and research that HIPAA was really our friend. But the biggest challenge was our first entry on this table. And that's the Federal Drug and Alcohol Treatment statutes or 42 CFR Part 2. We can spend lots of time discussing this slide, which we have in the past. However, in the end, we ended up harmonizing around the treatment role. Perry showed you the attestation screen. And that attestation screen coupled with our training processes and the limitation of the use of the exchange right now to treatment is really what helped us harmonize the existing statutes.

Next slide. We also realized that HIE takes a village. It's a huge learning curve. And you need to have lots of people who know everything at the same time. And to try to get that going was a significant orchestration challenge. As with the first bullet we tried to unobtrusively as possible engage multiple data partner employees from the Board Room all the way through to our contracts and compliance to our technical teams, all the way through to the exam room and the press room. All of these individuals needed to be engaged. They needed to be brought together. Some of these entities within an organization had never had a conversation. So we had to create some parts of our village. We also needed to keep our external as well as our internal stakeholders engaged. And this, too, was not an easy challenge. So learning for everyone at the same time as collaboratively as possible.

The next challenge and the question that we got frequently, especially in the beginning: If we build it, will they come? We engaged clinicians early on, as Perry mentioned, and all the way through every stage of the development. So when it came to inaugural users, we invited about 50 and ended up with 40 clinician users and their delegates. Each had some relationship to one of our three anchor hospital systems, which was very important in the provisioning and the credentialing and the trust process. But we also wanted to engage as many specialties and settings so that within this short period of time we could learn as much as possible about how to make AMIE better, where it fits for ourselves, for the clinicians and also for our data partners. So for three months we had our 40 clinician users share three record types: medication history, discharge summary and laboratory test results. Next slide.

It was very important in engaging our inaugural users that we set realistic expectations. We tried very, very hard to make sure that they understood what we expected from them and communicated with them frequently. We started with a rather detailed letter of understanding. And we stressed that the "Proof of Concept," which is what we were doing for those three months, included very limited data. The data that was available at the beginning was the starter data and that it would get better with time. And they needed to bear with us. We also employed a very high touch, multi-modal communication campaign. And the details are listed here, which we can talk about later, if you're interested. And that included 24-hour support by telephone, and the evaluation by University of Arizona Health Outcomes division. So our users knew upfront want to expect, what we expected of them. And we had lots of feedback with them.

So what did we learn from that proof of concept? Well, during those three months and really from Day 1, we had some central themes that our providers reported. The first one was that using AMIE helped them avoid admissions and procedures. You'll remember that all we had were discharge summaries that helped them understand if there were prior CTs or MRIs. And they found that very, very useful. As well as cardiac cath, ruling out myocardial infarction seemed to be the most productive admission avoidance process that our docs reports in the beginning.

Next slide. They also noted that and basically said: Well, it's a no brainer. It certainly helps improve safety. But the impact really hits home I think in the two lower scenarios where the unit secretaries, one in a code situation and other in a routine patient flow situation really shared how it impacted their ability to do their job and their satisfaction in being able to make a difference in the care of the patient.

Next slide. We also found that drug safety doesn't really require an elaborate clinical decision support system to make a difference. Just having the medication history available at the point of care enabled our clinicians to avoid adverse drug reactions. And in the second scenario, we found that even when there was an established doctor/patient relationship, that patients didn't necessarily always know what information they needed to share for good safe care.

Next slide. Our emergency room doctors really were quite thankful at being able to finally have a tool to combat diversion and drug seeking. And one of the other benefits from the rather striking scenario that is listed second where we had a patient who saw 32 different doctors approximately every three days in the three months prior to the particular index visit here was able to be shown this history and actually get help and treatment for the pain problem that they had. Next slide.

And we were also quite gratified to find that even with the limited amount of data that AMIE could improve the efficiency of the clinician in the very mundane but time consuming process of getting data at the point of care. We were very happy that not only physicians but our delegated staff were able to identify how much AMIE helped at that time. And really the possibility of more help in the future. Next slide.

Our users told us that they loved AMIE. But to make it better we needed to have more data, more access, and a lot more functionality. And their specific details are listed here. Next slide.

The really most important outcome and the solution to our biggest challenge was that AMIE helped not only the users but everyone who has come in contact with us sees the possibilities for better care. In these two quotes, our users called it fantastic, revolutionary. But our real goal is to use AMIE to help us get off this roller coaster and to make health information exchange ubiquitous and the norm for our state, for our nation, and across our borders. Thank you very much.

**Foster Gesten**
Great, thank you Anita so much. Great presentation and lots and lots of questions and lots of folks who clearly have a lot of interest in the nuts and bolts. Let me see if I can summarize a few of them before we move on to the next speaker. There are a number of different questions about how patient consent is administered. Is it an opt in, an opt out? Can you speak to that a little bit?

**Anita Murcko**
Sure. On the slide where we mentioned harmonizing statutes and I noted that HIPAA was our friend, what we have essentially done with AMIE is automated the fax machine. So the same processes that already exist for sharing information are already in place. We did take some additional steps, however. And our hospitals had the opportunity to do their own sequestering and filtering, which they did. One of our hospitals experimented with an opt out process. And our hospitals that are currently engaged with going forward are interested in the opt out process. And insofar as our laboratory tests were concerned because those of you who are familiar with the different ways that we obtain consent for doing lab tests know that the lab tests are a different animal. We handled the lab in a rather unique way by first identifying the information that was most often exchanged and then identifying those labs, which were most consistent with any of the sensitive information, and making those unavailable until we had an opportunity for larger stakeholder policy agreement. We also for the proof of concept withheld information for 24 hours so that the ordering physician would have an opportunity to review and communicate that information before making it available to the exchange. So the treasure trough of policy landmines is certainly something that we could spend many hours talking about. And our new evolving AMIE not-for-profit governance is going to be tackling many of these issues.

**Foster Gester**
Great. The questions are rolling in. Is AMIE open to all physicians and patients or just those in the Medicaid program?

**Anita Murcko**
AMIE currently is open to users, clinicians, not patients and is open only to those who follow our provisioning process. The process requires, at this time, that a physician or nurse practitioner, PA, or mental health practitioner be a contracted Medicaid provider. And so right now, the information in AMIE is all payor. It's not -- it's agnostic to any payment. But the membership of the providers restricted only to Medicaid providers at this time. The Governance Board is working on expanding the access and modifying some of the provisioning processes.

**Foster Gesten**
One last question and then we'll move on but I hope to get back. There are a lot of great questions. Were there any incentives or methods to encourage early adopters to participate or later on for providers to participate?

**Anita Murcko**
I'm going to say that Sue may address some of those. But really, we were quite gratified that there were enough forward thinking physicians and leaders in our state that the incentives were being part of something that was going to improve care and be at the cutting edge. And for that, I hope that all of the participants received the incentive that they were looking for.

**Foster Gesten**
Great, well, thank you so much. Our last speaker will be Dr. Sue Sisley who is a practicing internist and psychiatrist. Dr. Sisley has a private practice in the inner city of Phoenix and also serves as clinical faculty at St. Joseph's Hospital and Medical Center at the Mercy Care and Bell Medicine Clinic for indigent patients. In addition, she founded and serves as the CEO of a non-profit corporation entitled Insuring Tomorrow Productions, which delivers health education through music, theater, and dance. She has received many honors for her work and volunteerism including the Humanitarian Award by the University of Arizona College of Medicine and the President's Distinguished Service Award from the Arizona Medical Association. We're pleased to turn this over to Dr. Sisley.

**Sue Sisley**
Thank you, I'm first just going to talk about my reaction to the AMIE concept. When it was first described to me I was excited but skeptical. I was in disbelief this could actually come together. It seemed so farfetched to think these partners could ever play nice together and cooperate to provide all of this data, especially with no legislative mandate requiring them to supply the data. So my response to the invitation from Dr. Murcko to be part of the proof of concept was you know, I was excited. I thought it was a fabulous concept. But I felt there was no way it would ever crystallize. It kind of seemed like vapor where it seems impossible to create such a monumental culture change like this but knowing Dr. Murcko and then having a chance to meet all of the members of her team – she had a really stellar team of IT experts and engineers that had just sheer determination and articulate advocacy. And I couldn't help but be swept up by that and start to realize that this might actually come to fruition.

So from the first time I searched a patient and was able to retrieve data that was just pure euphoria. I was so amazed this had actually come together and I could finally see the potential for this database. Unfortunately, the early months had such spotty data since not all of the partners were fully on board and there may have been tech glitches to getting the data infused and updated regularly. So many of the patient searches would come up blank in the early months. But so initially it became part of my workflow because it was a requirement as part of my participation in the proof of concept that we'll call it the clinical champion. I was supposed to check the database throughout my day and a certain number of times each week. And did I that. But as searches came up negative, I began to lose interest. Then a couple of months later my interest was renewed when I discovered how much data and cooperation they had managed to secure. So now, this has become a truly amazing tool. Most of my searches bring up some data. Maybe not everything, but there's always some information to enlighten me about some area of the patient's care. And now I can't live without this tool. It's just become so crucial.

So I think we can go on to the next slide. So data availability has become more than I could have ever imagined. The lab data is definitely the most useful because it seems the most readily

available. It's updated frequently. And it really reduces my need to repeat labs. Now, just an example, if I call Sonora labs about a patient when the lab data wasn't ordered by me originally, they won't give me the lab data because of HIPAA laws. So thanks to AMIE, I can still access this crucial data and I don't have to get stuck in bureaucratic nightmare trying to get medical releases and such. So this has been really helpful so that I don't have to also order these repeat labs on the same patients.

The hospital discharge summaries are great when they are present. But they are still rare for me. I cover patients through the entire state. So this database primarily was focused on Maricopa County so I'm hoping down the road that outside hospitals in rural areas will also come into the fold.

The medication lists definitely are critical in helping us confirm information. It's reduced the amount of redundant meds that I prescribe. You know, being able to see the whole breadth of meds that they are on from other prescribers. And also, you know, I've taken care of a lot of low functioning patients with very low health literacy. They often don't know how to pronounce the names of their meds. They definitely don't know the dosages. So these med lists, even though they weren't always comprehensive med lists at the beginning, but now they are becoming very complete and a very useful tool. But as Dr. Murcko mentioned the issue is just we're still hungering for more data now that we've had a taste of how effective this can be, we just keep, you know, hoping that they are going to be able to pursue more and more data.

On the next slide we're going to talk about some of the examples of how this has improved my practice. And I'm going to share some anecdotes with you that have been really good experiences through AMIE. I discovered a patient who was already on an MAOI inhibiter and I was getting ready to prescribe an SSRI to this patient. So these meds were being prescribed by two different doctors unknowingly and fortunately because of the AMIE database, I was I believe to uncover that and avoid a possibly catastrophic experience for the patient.

I learned of a patient having severe elevation of liver function tests in a patient who I was prescribing Depakote. And this had been floating around, this data, for a few weeks. And nobody had picked up on it. And thanks to AMIE, even though these were labs that I didn't order, I was able to see those and stop the medicine and avoid further liver impairment.

Another interesting thing for the state of Arizona is that since as Dr. Leib mentioned we have a carve out in the state so that the mental health and the medical care for indigent patients is covered through two different agencies, that often unfortunately, don't communicate with each other. So I'm in a unique position where I actually manage patients on both sides of the -- you know, I see patients in a mental health clinic where I'm only allowed to order certain labs. So for instance, even though in the mental health clinic I may order atypical antipsychotics, which are

well known to promote diabetes, interestingly I'm not allowed to order a hemoglobin A1C in the mental health clinics. So in order for me to get information about the gold standard for screening for diabetes I would have to contact the PCP. It usually takes forever. It's very cumbersome. So this has been absolutely crucial this AMIE database in enabling me to see data that I wouldn't normally have access to. And then also I take care of a number of patients in the Indian Health Service who I see through telemedicine. And again, those patients, the health literacy is so low that this has really helped me avoid a lot of really potentially tragic drug interactions.

So in terms of our next slide, which we want to talk about how I integrate this into my workflow, basically I leave AMIE on all day and I check it throughout the day as I see each patient. So I log in in the morning at whatever site I'm at. So regardless of whether I'm at St. Joseph's Hospital or I'm at the indigent clinic or I'm at the University of Arizona medical school or I'm at my home computer doing telemedicine, I can see the data from anywhere. And that's a fairly beautiful concept and I think that it's really helped make, you know, make access to this so flexible.

So in terms of the final slide, essentially I feel like I've saved a lot of money to the system by avoiding repeat labs, avoiding tragic drug interactions by being able to review a full med list. This obviously has huge potential to reduce errors, improve patient safety and really increase efficiency and just overall cut healthcare costs system wide. So we're all very grateful. All the folks who had the privilege of being clinical champions in the proof of concept are really honored to be part of it and really look forward to seeing this flourish. So thank you very much.

**Foster Gesten**
Thank you so much Dr. Sisley. And thank you to all of the speakers. We're going to open up the phone lines in a second but before I do there are a number of questions that were asked on the web. And let me just try to summarize a couple of them and they are not directly for you, Dr. Sisley. I think many of them – anybody from the Arizona team could answer them. And you mentioned dollars and saving dollars and we have a number of questions that relate to that in one way or the other. So the questions are, you know, how is the infrastructure currently being financed? What do you see in terms of sustainability issues and financing? Do you see the potential for costs to providers in the future for participation? And is there any data, any early data that suggests that there's any reduction in costs through reducing duplicate testing and so forth?

**Sue Sisley**
Well, I know I talked to Dr. Murcko about -- after seeing how successful this was, I offered to personally donate funds to help support this when the future funding of this was unclear. So I know that the other staff will have specific information about that. But I just wanted to share

that I know personally we have been so impressed by this that we would be happy to open our own pocket books.

**Perry Yastrov**
This is Perry Yastrov. I'll answer that. I'm not really sure how to start, so bear with me. We're forming a non-profit and the non-profit is going to be made up of our inaugural data partners. And certainly they have already committed to help fund this going forward. Now, to date, it's been funded solely by the Transformation Grant. Now one of the things for any Health Information Exchange is growing to a scale where any unit of cost, whether it be a transaction or number of patients or what have you, is small enough for any participant to be comfortable paying. So in that regard then, the next few years we're going to see a lot of expansion of the Exchange. And we anticipate our incentives as being one of the sources of funding to help us accomplish that. And then longer term, as we're modeling our costs, we can figure out a pricing model that then will be self supportive as well as being at a level that is comfortable for anybody that's participating on the Exchange. So we are exploring who we might charge, what we might charge, and how we might charge but we are still modeling those and trying to figure out what might be the best approach.

**Foster Gesten**
In terms of cost reductions, any early data or suggestions or is it too early in the process?

**Perry Yastrov**
So far it's been anecdotal. It is very early in the process and we are limited with respect to the number of clinicians that are participating. We are anticipating looking at our billing behavior of those that are participating, what kind of claims we see at least within the Medicaid program of these participants before AMIE and then after AMIE and seeing if there's any significant impact. But we haven't undergone that study at this point.

**Foster Gesten**
Great. So let's get to the phone and let people jump in. To ask your question by phone, as it says on the slide, just hit star 1 on your telephone keypad. The operator will connect you to us. As Judi noted earlier, and as many of you are doing, you can send questions to us by using the Q & A feature on the screen. Just type in your question and click send. We'll make every effort to get to as many of the questions as possible. Operator, do we have anyone on the phone?

**Operator**
We do not have anyone in the question queue at this time.

**Foster Gesten**
Okay. Well let me ask a question. A number of people also asked about patient access and do patients have access now. It sounds like the answer is no. Will they soon? Can patients see a report of who looked at their data? And how do you deal with -- the goal is to have treating clinicians view the data but what about colleagues or other folks who might just be interested in getting in and looking at data? How do you deal with that?

**Perry Yastrov**
I'll answer the last part of that first. They have to have a treatment relationship. We are exploring within a practice from a workflow perspective of what kind of support staff would make better use of AMIE in support of the clinician. But again, the policy is that the information is only accessed for the purposes of treating the patient. So somebody may be curious about it but if they are not treating that patient they should not be assessing the information. With respect to patients having access, at this point in time they do not have direct access. However, part of the policies we developed as we started AMIE up was that they can ask their clinician to have the information that's available on AMIE printed out for them and then handed to them. And then through their interaction with the clinician, they can either give feedback on that information to where the data is sourced, if they have any corrections or what have you that needs to be made there. Longer term, we do anticipate one possible scenario might be through interoperability with personal health record systems or eventually if that doesn't seem to look like it might happen, we might open up our viewer for patients once we figure out a right protocol for allowing that to happen.

**Foster Gesten**
Great.

**Anita Murcko**
Let me also follow up. I think there was another part of that question that asked about access to the records. And as part of the policies that Markle Foundation has put in place and that we also espouse to is that patients have the ability to ask for a copy of the information that identifies who accessed their record. And we have responded to and have a process in place for that. So that was the other part of the question.

**Foster Gesten**
Great, thank you. Dr. Sisley I've got one for you. Does AMIE let you look at compliance information for prescriptions you may have your patients on? For example, any notices or the ability to see if a patient has ever picked up a refill on a prescription.

**Sue Sisley**
No, the only thing -- it does tell you whether it was dispensed or not. But I think the medicine wouldn't be listed if it wasn't dispensed. So it's not that sophisticated yet. I don't know if there are plans to do that. Dr. Murcko, do you know?

**Anita Murcko**
There's a days late calculation that occurs based on the number of dispensed medications. And we are really looking hard at working with our claims aggregator at using the newest standards so that we can provide as much information through NCPDP transactions as possible. So that's currently in the works.

**Foster Gesten**
Let me just see if there's any questions on the phone.

**Operator**
There are no questions over the phone as of this moment.

**Foster Gesten**
Okay. A shy group. Well, not shy about sending questions electronically. There are a couple of questions about who is actually responsible for inputting the data and I think there was a question about whether folks at the point of care input data or how that data is put together. Can you comment on how the data gets put into the system?

**Perry Yastrov**
So the data – the discharge summaries for example – come from the hospitals. So they have their processes for how their data is captured. The lab test results come from the labs. So that would be in response to the orders that are submitted to them for performing those tests. And then the pharmacy information is based on claims data. So that's coming from the PBMs that process the payments for the medications. There is a feedback loop again if there's any -- this is Perry, by the way. If there's any discrepancy that needs to be reported, there's a process for us getting that information back to the hospital or the lab. Or ultimately the pharmacy or the insurer that's paying for the pharmacy claims.

**Foster Gesten**
Okay. What type of support was needed during your go live and post go live phase of this? What type of help desk operations do you have in place right now to help support users with the system?

**Perry Yastrov**
I'll answer the first part and then hand it over to Dr. Murcko. We have 24 by 7 support. There was about an initial training of a couple of hours as the proof of concept as we moved on the training was only about an hour. And the technical support as far as use of the application has really been nothing more than helping them with their passwords. You know, forgetting what it is and resending it for them. But beyond that, there was a lot of touch points that we had in the proof of concept and I'll let Dr. Murcko talk about that.

**Anita Murcko**
Yeah, most of the work that was put in really had to do with getting feedback from our participants in as unobtrusive way as possible. So we had these FIG sessions, Facilitated Information Gathering sessions, that as part of their user agreement and clinical champion discussion, they knew that we would have these monthly for the three months. We also made available on the web weekly feedback forms that we requested they complete. And then our provider relations manager did alternating onsite as well as telephone and e-mail follow-ups with anyone who needed that as well as on a regular scheduled basis depending on the size of the clinic. Probably the most high touch part of this was keeping in touch with the bosses of all of those who were involved. Since we were working with a number of the hospital academic training centers as well as faculty clinics, it was very important for us to let everyone who was providing staff and resource time to clearly understand what that necessary commitment was, when it was, and how much it would be. The other area was maintaining the web site. So in addition to our azamie.gov web site, which is not terribly robust at this time, we had a very robust and continue to have a very robust clinician web site where we have some on demand training, all our resources, the ability to register for events, to send feedback, and to receive feedback. So a lot of infrastructure in the structured communication with our providers was part of this operational support that we put in place. And I believe that Perry mentioned the 24/7 support. And although we have people on call, no one has complained. No one has been overwhelmed. The system itself works very, very smoothly. And we have a very high percent uptime. So very few support calls are necessary in that realm.

**Foster Gesten**
Great. We've got a couple of questions about eHRs and integration with eHRs and they include how does it work currently or will it work currently with eHRs and will it be vendor neutral and how are you dealing with those issues in terms of synergizing and interacting with electronic health records?

**Perry Yastrov**
This is Perry. I'll address that. Currently we are not interfaced with any eHRs. We haven't found any in the area that are interoperable at this point. We are starting a project with one of the hospitals that's implementing a vendor provided eHR system. And they are following the XDS

standard, which is also converging with the NHIN interoperability standards. That's what we intend to support. We anticipate that to be vendor agnostic. We really want it to be one interface that any standardized eHR could connect to. We don't want to get into the business of putting in custom interfaces.

**Anita Murcko**
This is Anita. Let me follow up on that. Insofar as that as we sat down with our data partners, one of the other very important deal breakers was that this information would be displayed and not modifiable in any way, shape or form. And from the display that they would provide either as a PDF representation, a hard copy or on their own web site. So we were not permitted to have any electronic consumability of the information that was made available through AMIE for these first rounds. So we aren't doing it because we weren't able to do it legally. But certainly, our technical team can do just about anything if they want to.

**Perry Yastrov**
And I would add along those lines the concerns that our data partners had to do with, you know, system of record type of issues, accuracy of the data. If they were giving up control of it and it got altered in some way, you know, what was the liability associated with that. I believe as the data sharing standards and policies become better defined, how systems manage that type of information and guard against modification of the source will be resolved and being able to share and consume data within eHR will be much less of an issue.

**Foster Gesten**
Great. Operator, do we have anyone on the phone?

**Operator**
No, we do not.

**Foster Gesten**
One of you, it may have been you Dr. Murcko, mentioned something about automating the fax machine. Can you explain a little bit more what you meant by that?

**Anita Murcko**
That what AMIE has done is allowed information to be shared more efficiently between treating providers. And the relationship that one has now with a fax machine that provides the ability to connect providers and get information at the point of care is really the closest analogy.

The notice of privacy that is required when engaging in a treatment relationship is sufficient for exchange of information in the way that AMIE has been designed. And as a proof of concept, it was considered to be sufficient. However, in the next version of AMIE, we do have a consent

module specifically that has been designed. And as we evolve the policies that will inform the technical design of the consent module, we will put that in place. But I'm sure that anyone who is involved has been through the discussion of opt in, opt out, notice only or no consent. And we are at this time, providing a notice and in some cases an actual opt out option.

**Foster Gesten**
Thanks, we got a number of questions about that, as well. A couple of people have asked whether you know if there are other states that are implementing systems similar to yours. And are you specifically trying to sort of promote or work with other states in the development of this? I know there are a number of other states that got Transformation Grants. Do you have a sense of what the landscape is?

**Perry Yastrov**
There's a number of states that are doing similar things. Although I think the phrase of if you've seen one HIE, you've seen one HIE holds true here. A number of initiatives are claims based, some are clinical. The scope of who is participating is different from one initiative to another. As the Chairman of the HIE work group of the NASMD-hosted Medicaid Transformation Grant work group that Director Rodgers formed, there's at least 13 states that we have had actively involved in the work group that have been communicating and sharing experiences back and forth.

**Foster Gesten**
Great. Somebody asked whether you saw any specific challenges related to rural providers or Federally qualified health centers or other entities that care for the medically underserved, which is really your provider population for your program, but have you seen any particular problems related to one of the other group of folks?

**Anita Murcko**
I would have to say that broadband access is at the top of the list. And that's an issue that we're not dealing with through AMIE specifically. But we do have an organization that is a broad public-private stakeholder group called the Arizona Healthy Connection. And one of the focuses is to work with those that are planning, building and making available better broadband connection through the state. So that's really at the top of the list. And the second challenge, which is really more of a cosmetic challenge at this point, is simply being able to have the appropriate staff to travel out so that we can work hands on with those in the rural environment. But with the involvement as Dr. Sisley mentioned with the Arizona telemedicine team and with our Federally qualified health centers that are diversely situated throughout the state, we anticipate being able to reach and touch everyone as long as we can get the broadband out to them.

**Foster Gesten**
Great. I'm sorry; I'm still here. I'm just paging through because I know there were a number of other questions. There was some question about the system allowing tracking of referrals at some point. Being able to both I think provide referrals, a system to make referrals and also track them. Is that a vision of something in the future or maybe it would be good to talk about -- because we have other questions about what's around the bend? What do you see in the next year or so in terms of this program?

**Anita Murcko**
Well, let me start by saying that the Exchange is the exchange. Perry mentioned another effort known as the Purchasing and Assistance Collaborative for Electronic Health Records or PACeHR and we have included in the solicitation a requirement that any of the organizations, the eHR vendors that anticipate being part of the PACeHR will offer a web based electronic healthcare product or several products, that it will be able to interface with AMIE. Those products will have the ability to track referrals and to do all of the standard CCHIT certified actions of an Electronic Health Record. AMIE's job is to get the data that is used around shared efficiently. Interfaces are a huge expensive problem for Electronic Health Records. And so we see AMIE as really being instrumental in helping share this level of electronic exchange in the state. And I'm sure that Perry has comments from his standpoint as well.

**Perry Yastrov**
Yeah, just to add a few things. AMIE is an infrastructure for connecting systems together and getting away from a point-to-point type of interface. So once you've interfaced to AMIE, you have the ability to communicate with any other system that's connected on the exchange. It's a messaging infrastructure so that really means then in the context of the question where you want to send any state referrals, that is something that your source and destination system need to be able to process and send out. AMIE will facilitate the movement of that message across the network to the destination and from the source. So it is something that as the end systems, if you will, are able to support from a functional perspective, AMIE certainly will be able to facilitate the exchange of that message.

**Foster Gesten**
Great. Thank you. Well, let me thank all of the speakers. We are just about out of time. Thank you all for sharing the ups and downs of your roller coaster ride. Your innovations and the lessons are helpful to all of us who are visiting the same amusement park or will be visiting it very shortly. At this point, I'll turn this over to Judi for last comments and wrap-up.

**Judi Consalvo**
Foster, thank you very much. And I want to thank all of those in the audience who sent in questions. And to our speakers. This is such a great session filled with a lot of knowledge and

information regarding the process and challenges that you face in implementing this innovation. If there have been some questions left, please do send them in or please contact us at info@innovations.AHRQ.gov. We value your feedback. And if you want, I do hope that -- I encourage you to send in your questions.

Now, at this time if you can spend just a few minutes completing an evaluation that's about to appear on your screen. Again, we would like to hear from you. We would like your feedback. And it will help us to craft some additional webinars for you in the future.

So again, on behalf of AHRQ, I want to thank the speakers and our audience. And hope to see you again and talk to you again in the future.

**Operator**
Ladies and gentlemen, this does conclude today's teleconference. Thank you for your participation. You may disconnect your lines at this time and have a wonderful day.